

Appl. No. 10/765,633
Amdt. dated October 28, 2005
Reply to Office action of August 2, 2005

REMARKS/ARGUMENTS

Claims 1-42, 44-60 and 62 are currently pending in this application as amended through Amendment B filed May 20, 2005. Claims 1-20 and 51-62 were withdrawn after responding to the first restriction requirement of October 8, 2004; and Claims 22-24, 26-29, 31-33 38 and 40 were withdrawn after responding to the election requirement of April 14, 2005.

In this amendment, Claims 1, 21, 30, 34, 35, 36, 37, 39, 41, 44, 46, 48 have been amended.

Claims 51-60 have been canceled and Claims 43 and 61 were previously canceled, without prejudice to filing a continuation with respect thereto.

Claims 2-20, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 38, 40, 42, 45, 47, 49, 50, 62 remain unchanged.

Claim Objections

Initially, the Examiner noted some claim objections. The Examiner noted that there was no antecedent basis for "said coupler tube" in Claims 30 and 46. Antecedent basis exists for "said tube", and it is apparent from the claim that the tube is the tube of the coupler. Hence, "said coupler tube" has been changed to "said tube" throughout the claims.

In Claim 41, the Examiner noted that it was not clear which surface of the tube wall the key leg extended from. Claim 41 has been amended to provide that the "leg [extends] from said wall". This removes any ambiguity regarding the claim.

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The changes to the Claims correct the informalities noted by the Examiner. Withdrawal of the objection to the claims is thus respectfully requested.

Rejections Under 35 U.S.C. §103

The Examiner rejected Claims 21-34 and 41-42 under 35 U.S.C. §103 as being obvious over Pat. No. 2,226,547 (Boynton) in view of Pat. No. 2,562,014 (Buhayar). As discussed more fully below, Claims 21 and 42 have been amended to more fully set forth the inventive aspects of Applicants' invention.

As set forth in the application, Applicants coupling system comprises a tube that couples or connects together two pipe segments of an animal watering system. As such, the pipe segments comprise at least one (and generally several) outlets along the length of the pipe segment where drinkers are connected to the pipe segments. The orientation of the drinkers in an animal drinking (watering) system is important. The drinkers must all be generally vertical. If the drinkers are not vertical, they may leak. A typical line in a watering system can extend for hundreds of feet, and thus is comprised of a number of pipe segments which are connected together. Applicants' coupler facilitates assembly of the watering line of the drinking system. As described in the application, Applicants' coupler rotationally aligns adjacent pipe segments, such that the drinkers (and hence the fluid outlets of the pipe segments) are all rotationally aligned. That is, the coupler ensures that the pipe segment outlets are all substantially co-linear, and all lie substantially in the same plane – no matter the length of the watering line.

As animals (i.e., chickens) move about in a chicken house, they often bump into the watering line or the drinkers suspended from the watering line. After a time, all these impacts cause individual pipe segments to rotate relative to adjacent pipe segments. When this happens, the orientation of the drinkers will be change, and the drinkers will no longer be generally vertical. This can result in leakage from the drinkers, and require that someone fix the rotational alignment of the affected pipe segment. However, rotating one pipe segment can affect the rotational alignment of other pipe segments. Hence, correcting this out-of-alignment condition can be quite difficult and time consuming. Applicants' coupler has the added benefit of substantially preventing any one pipe segment from being rotated relative to its neighboring pipe segment. Hence, a watering line comprised of pipe segments coupled together using Applicants' coupler should substantially reduce the need, if not entirely eliminate the need, to correct the rotational position of individual pipe segments due to movement of the chickens in the chicken house.

Hence, Claims 21 and 41 have been amended to provide that the "tube coupling mechanism [is] for rotationally aligning and positively rotationally fixing two adjacent pipe segments of an animal drinking system relative to each other" and that "said pipe segments [are] hollow to allow the passage of fluid therethrough and [comprise] at least one outlet positioned along the length of said pipe segments". Claim 21 has been further amended to provide that the tube "slidably" receives the pipe segments, and that the keying element "engages ends of said pipe segments

to rotationally align and rotationally fix adjacent pipe segments relative to each other such that said at least one outlet of each of said two pipe segments are rotationally aligned".

Claim 41 has been further amended to provide that the pipe segments include "a slot at at least one end of said wall" and that the coupler leg and the pipe segment slot are sized and shaped to engage each other. Like Claim 21, Claim 41 has also been amended to provide that "when said pipe segments are mated with said coupler, said outlets of said two pipe sections will be rotationally aligned with each other".

None of the art of record teach or suggest a coupler which will rotationally align adjacent pipe sections such that outlets along the side of the pipe segments are rotationally aligned with each other. Boynton discloses a semithreadless drill stem for use in wells. The drill stem comprises a coupling wherein a first tube is *threadedly* connected to one side of the coupling and a second tube is slidably received in the coupling - this second tube and the coupling having lands (1a and 2a) which mesh with each other. Because one of the tubes is threaded onto the coupling, the rotational alignment of the first tube relative to the second tube cannot be assured, or even determined. Hence, Boynton does not teach or suggest a coupling which will connect two pipe segments together such that fluid outlets along the length of the pipe will be aligned. Rather, like the prior systems disclosed in Applicants' application, alignment of fluid outlets would require careful rotational

positioning of the threaded pipe segment. Further, in view of the threaded connection of one of the pipes into the coupling, Boynton does not rotationally fix the adjacent pipe segments relative to each other. If a threaded connection were used in the drinking system of a chicken housing, the chickens would bump into the threaded pipe segment. Because the pipe segment is threaded, it can rotate, and with enough impacts from the chickens, the pipe segment will rotate, such that the pipe segment outlets (and the drinkers of the watering system) are no longer aligned. Thus, Boynton also does not teach or suggest a system which will "rotationally fix" the adjacent pipe segments relative to each other.

Buhayar discloses a jointing means for pipes and couplings and is primarily directed to a resilient packing ring for use with the coupling. Buhayar does disclose that two adjacent pipe segments can be connected to a coupling by means of a bayonet slot or the like. However, Buhayar do not teach or suggest that the coupling will rotationally align fluid outlets of the adjacent pipe segments. Further, as noted, because Buhayar disclose a "J" shaped slot, the pipe segments have to be rotated into place about the pin of the connector. Because of the inherent curvature of the "J"-shaped slot, the use of the slot and the rotation of the pipe segments may allow for outlets of adjacent pipe segments to be out of alignment. Further, the curvature of the slot may allow for rotation of one pipe segment relative to another, and hence, the adjacent pipe segments will not be "rotationally fixed" relative to each other.

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Neither Boynton nor Buhayar were concerned with the rotational alignment of the two adjacent pipe sections, and hence neither addressed this problem. In view of the fact that neither Boynton nor Buhayar teach or suggest a coupler that will rotationally align the outlets of the two pipe segments or which will rotationally fix the two pipe segments relative to each other (to prevent the outlets from coming out of alignment), Applicants respectfully submit that Boynton and Buhayar, whether considered individually or in combination, do not teach or suggest the invention as set forth in Claims 21 or 41. Claims 21 and 41 are thus both believed to be allowable over the combination of Boynton and Buhayar.

Further, none of the art of record, whether considered individually or in combination teaches or suggests the invention of Claims 21 o 41 as now set forth. Pfister (Pat. No. 3327945) does disclose a system for orienting a gravity operated draft control gate of a furnace. However, Pfister teaches a system that orients the draft control gate. Pfister does not teach or suggest a coupler tube that will rotationally align two pipe segments such that outlets of the two pipe segments are rotationally aligned with each other and that will rotationally fix the two pipe segments relative to each other to substantially prevent the outlets from coming out of alignment.

Thus, Applicants respectfully assert that none of the references whether considered individually or in combination teach or suggest the invention as now set forth in Claims 21 or 41. Claims 21 and 41, and the claims which depend there

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from, are thus believed to be allowable.

Allowable Subject Matter

The Examiner noted that Claims 35-47, 39, and 55-50 were objected to as being dependant upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 35, 37, 40, 44, 46, 48 have all been amended to be placed in independent form and are now believed to be allowable.

Claim 36 depends from Claim 35; Claim 38 depends from Claim 37; Claim 45 depends from Claim 44; and Claim 47 depends from Claim 46. These claims are thus also believed to be allowable.

Summary

In view of the foregoing, Applicants respectfully assert that Claims 21-37, 39, 41-42 and 44-50 as now set forth are believed to be allowable. Applicants respectfully assert that at least Claim 21 is generic with respect to the species set forth in the restriction/election requirement of April 14, 2005. Hence, Applicants respectfully request that this restriction requirement be withdrawn, and that Claims 22-24, 26-29, 31-33, 38 and 40 be rejoined. Claims 22-24, 26-29, 31-33 and 40 all depend from independent Claim 21, and hence are believed to be allowable. Claim 38 depends from allowable Claim 37 and is believed to be allowable.

In addition, Claim 1 has been amended to incorporate the subject matter of Claim 21. Hence, Claim 1 as now presented includes the coupling mechanism of Claim 21. In view of this fact, Claim 1 is believed to be in condition for allowance.

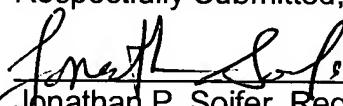
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Applicants recognize the Claim 1 was withdrawn as being directed to a non-elected invention. However, in view of the amendment to Claim 1, Applicants respectfully assert that the reason for the restriction has been mooted. Applicants thus respectfully request that Claims 1-20 and 62 (Claims 2-20 and 62 depending from Claim 1) be rejoined and respectfully assert the Claims 1-20 are in condition for allowance.

In view of the foregoing, Applicants respectfully assert that Claims 1-42, 43-50 and 62 are now in condition for allowance. Reconsideration of the application and issuance of a Notice of Allowability with respect to these claims are thus respectfully requested.

Respectfully Submitted,

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